ABSTRACT

In accordance with the illustrative embodiment, a diagnostic method for use with multi-element transducers includes determining an acoustic center of a transducer and determining an offset of the determined acoustic center from a theoretical acoustic center of the transducer. In some embodiments, the method also quantifies the impact that the offset has on performance of a transducer array. In some embodiments, the offset is used to correct signal processing calculations that rely on assumptions about the acoustic center of each transducer in the transducer array. A diagnostic system for use with multi-element transducers includes a projector, wherein the projector generates a sound; and a mechanical fixture, wherein the fixture aligns the projector with the transducing elements in the transducer so that in combination, the projector selectively ensonifies each of the transducing elements in the transducer.